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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/685,771 10/11/00 ARE

T 060938

EXAMINER

MM91/0920

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2100 PENNSYLVANIA AVENUE N W
WASHINGTON DC 20037

PATEL, I

ART UNIT

PAPER NUMBER

2841

DATE MAILED:

09/20/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/685,771

Applicant(s)

ABE, TAKASHI

Examiner

Ishwar B Patel

Art Unit

2841

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 August 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) 4-7, 13-16 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 8-12, 17 and 18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Election/Restrictions

1. Applicant's election of specie 1, claims 1-3, 8-12 and 17-18 in Paper No. 5 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-3, 8-12 and 17-18 rejected under 35 U.S.C. 102(b) as being anticipated by Marx et al., US Patent No. 5,376,759, hereafter referred to as Marx.

Regarding claims 1 and 10, Marx discloses a substrate comprising:

pads which are provided on the surface of said substrate (integrated circuit positions 18 with plated through holes 28, see figure 3, column 7, line 39-55); and

surface layers which are kept to the ground potential and cover the surface of said substrate except said pads and their peripheral (top and bottom outermost layers

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20, 22 of the sandwich arrangement are also conductive layers and are for connection to electrical ground potential, see figure 3,4, column 7, line 39-55).

Regarding claims 2 and 11, Marx further discloses the surface layers includes a top main surface and a bottom main surface (top and bottom outermost layers 20, 22 of the sandwich arrangement are also conductive layers and are for connection to electrical ground potential, see figure 3,4, column 7, line 39-55).

Regarding claims 3 and 12, Marx further discloses a conductive element which electronically connects said top main surface and said bottom main surface (the conductive edge shielding layer 43 of the edge surface 50 extends to the top and bottom outermost conductive layers 20,22 and is electrically connected directly to each of the outer conductive layers, see figure 3,4, column 7, line 55-68).

Regarding claims 8 and 17, Marx further discloses a signal layer which is provided between said top main surface and said bottom main surface, and has a pattern which is connected to at least one of said pads (internal signal layer 12 having connection with the plated through hole 28, see figure 3,4, column 7, line 39-55).

Regarding claims 9 and 18, Marx further discloses the interval between said pads and said surface layer defined to prevent said pad from short-circuiting (integrated

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circuit positions 18, shown as rectangular outlines in outermost layer 20, having associated plated through hole 18, see figure 3, column 7, line 39-55).

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Tanaka, Ishigaki et al., Yamaguchi et al., Gulick et al., Shunsuke Fujimoto disclose the substrate similar to applicant's claimed invention.

B

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ishwar B Patel whose telephone number is (703) 305 2617. The examiner can normally be reached on M-F (6:30 - 4) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey Gaffin can be reached on (703) 308 3301. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305 3431 for regular communications and (703) 305 7724 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308 0956.

ibp
September 17, 2001

Albert W. Paladini 9-18-01
ALBERT W. PALADINI
PRIMARY EXAMINER